Author's response to reviews

Title: High prevalence of lack of knowledge of symptoms of acute myocardial infarction in Pakistan and its contribution to delayed presentation to the hospital

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Version: 3 Date: 11 July 2007

Author's response to reviews: see over
Response to Reviewers

We thank both reviewers for their thorough review of our manuscript.

A point-by-point response is listed below to each of the reviewer’s comments. Changes made in the manuscript.

Reviewer 1: Julie J Zerwic

Thank you for encouraging comments.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Both figures have been deleted. The terms “literate” and “illiterate has been replaced with those who did or did not receive any formal education in the table 1 page 22.

P 4 2 Time from ED arrival to use of thrombolytic therapy is discussed as it relates to the US. Is there any information regarding Pakistan?

As study conducted in Karachi, reported that the mean delay time for administration of thrombolytics since arrival to ED was approximately 120 minutes. This study has been cited in the introduction part on Page 4 Para 2 line 7 (reference # 11)

5 2 The sentence that begins “We conducted an observational study to determine…” is confusing. Consider editing the sentence.

Thank you for the suggestion. The sentence has been revised to “The objectives of this study were to determine ……”. This has been mention on page 5 Para 2 line 10

6 2 Consider revising the first sentence. The portion of the sentence “..the concerned hospital was taken” is difficult to understand.

The sentence has been revised to “… permission from the selected study hospital was sought.” accordingly. This has been mention on page 6 Para 2 line 2

7 2 Define “couple of hours”

Thanks for comment. Couple of hours has be revised to first six hour and has been mentioned on page 7 Para 2 line 3

8 1 Unnecessary to utilize parenthetical descriptions unless the variables are different than what the reader would expect
9 2 Third sentence from the end of the paragraph (“A step wise method…”) is a fragment.

Thanks for the comment. “A step wise method…” fragment has been deleted. Page 9 Para 2

12 2 Consider revising the sentence that begins “we found that at least a third…” In the same sentence, provide a number of hours instead of simply stating “significant delay to the hospital”
Sentence has revised and this has been mentioned on page 11 Para 2 line 8

At least a third of the patients with AMI presented after six hours of delay to the hospital

13 1 Change “form” to “from”
Form has been changed to from and mentioned on page 11 Para 2 line 14

15-16 It is unnecessary to provide a numeric list of limitations. Consider revising the paragraph so it flows more easily.
Numeric list of limitation has been removed from the list. Page 13 Para 2

Figures: The figures are not particularly helpful and could be summarized in text.

Figure 1 and figure 2 have been removed. The key points “Almost all subjects reported chest pain (98%) and ghabrahat (uneasiness) (94%) at the time of heart attack. 34% of the study subjects sought medical care six hours or more after the onset of AMI time, that is, had a delayed presentation. Over two-thirds (66%) of the study population failed to recognize the symptoms of myocardial infarction” of both figure has been mentioned in the result section on page 10 Para 1 line 5
Reviewer 2: Sharon McKinley

Thank you for your comments.

1. The putative interaction between education levels and tobacco smoking still features prominently as a finding of the study, despite the circumspect acknowledgement that no statistically significant relationship was found in the analysis. No inferences can be made from this insignificant finding, which may be due to chance. It should be noted in the results but nothing further made of it. It has been omitted from the abstract but is still in the conclusion.

Thank you for the comment. Interaction part has been removed from both conclusion and discussion section.

2. The limitation of including only patients who had chest pain should be added, given the increasing amount of research being published that reports the occurrence of other AMI symptoms without chest pain, and of clusters of symptoms that do not always include chest pain.

Thanks for the comment. However, as mentioned in the manuscript (page 6 line 8), our study population was defined as patients presenting with symptoms of AMI leading to the diagnosis of their first AMI and surviving the initial 24 hours. We have not restricted our self to patients with chest pain only. In fact we used the European Society of Cardiology and American College of Cardiology’s criteria to define AMI. This is as follows

The presence of at least two of the following three factors was considered as diagnostic for AMI.

1. Typical chest pain lasting for at least 20 minutes,
2. Electrocardiogram showing ST elevation of at least 2 mm in two or more contiguous leads with subsequent evolution of the ECG, and
3. Diagnostic cardiac marker (doubling of creatine kinase with at least 10% MB fraction) or elevated or positive troponin I or T.

In fact, about 18 subjects included in our study did not report chest pain but were diagnosed with AMI (refer table 1 on page 23). Therefore, this is not a limitation of our study.

3. The symptom named “grabrahat” may not be unique to Pakistanis or other South Asians experiencing acute coronary syndrome. General feelings of uneasiness, anxiety and a sense of impending doom are recognised symptoms of acute coronary syndrome. Therefore there should be acknowledgement that the grabrahah symptom probably is documented in other cultural groups, but described more vaguely. It would be interesting to learn the literal translation into English of “grabrahat”, if there is one. This may be a useful addition to the description of ACS symptoms for those with English as their first language.
Ghabrahat” (fidgetiness) is a cluster of symptoms that includes a vague sense of anxiety, restlessness uneasiness and feeling of doom and it has been mentioned on Page 8 Para 2 line 11

4. It needs to be explained more clearly in the statistical methods that the repeat analysis using the 2 hour cut off was the sensitivity analysis.

Thank you for the comment. The purpose of sensitivity analysis has been added on Page 9 Para 1 line 10

5. The authors have added a single statement and a single reference to the conclusion that “public education alone may not be sufficient” to change behaviour in seeking treatment for ACS symptoms. This is insufficient – there is cumulative evidence that public education campaigns have little impact on patient behaviour in responding to ACS symptoms (see Kainth A, Hewitt A, Sowden A, Duffy S, Pattenden J, Lewin R, Watt I, Thompson D. Systematic review of interventions to reduce delay in patients with suspected heart attack. Emerg Med J. 2004 Jul;21(4):506-8). The problem of the possible means of influencing patient response to ACS symptoms needs to included in the discussion.

Thanks for the comment. Reference # 47-49 has been added on page 15 Para 2. Studies have also suggested that knowledge and mass public education campaigns alone may not be sufficient to change behaviour in seeking treatment for ACS symptoms. The impact of other strategies including targeted education of high risk groups and their family members, content of educational message in particular emphasizing the importance of benefit of administration of early administration of thromolytics, and calling an ambulance for a suspected AMI need further study.

I have for asked the advice of the editors about how much correction of English expression a reviewer should do, and await their advice before making any corrections to expression. Whatever the response about that, there are some terms used by the authors that would be perceived as derogatory by many people. The term “mentally retarded” (p. 7) should be changed. Daily functioning and IQ apparently were not measured. Perhaps more correct terms could be intellectually impaired or developmentally delayed. The terms “literate” and “illiterate” appear to refer to those who did or did not receive any formal education. It is preferable to use these objective terms to describe people rather than the derogatory terms “illiterate” and “mentally retarded”.

Thank you for the comment. Mentally retarded term has been changed to intellectually impaired or developmentally delayed and this has been mentioned on page 8 Para 1 line 2. The terms “literate” and “illiterate has been replaced with those who did or did not receive any formal education.